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MESSAGE *from the* PRESIDENT

Rhode Island Medical Society

THE committee on scientific work of the Rhode Island Medical Society is hard at work on the program for the annual meeting to be held in Providence June 3rd and 4th. This program will follow somewhat the pattern of previous years but with some variations which we hope will be conducive to greater sociability enabling the members and their friends to become better acquainted.

Morning clinics of a scientific nature are being prepared at the following Hospitals—Rhode Island, St. Joseph's and Charles V. Chapin. As usual, the afternoon meetings, Wednesday and Thursday, and the evening meeting Wednesday will be held at the Rhode Island Medical Library. Already our afternoon programs are largely arranged and on them will appear not only several outstanding members of the Society but other leaders in their fields from out of the State.

The purpose of the committee on scientific work and other officers of the Society is to make this meeting highly successful and one to be pleasantly remembered. We trust it will prove to be of value scientifically and pleasure socially.

The desire of the present officers is to see the Society take its proper place in the medical field of the State. We hope that in the future the Society will be able to bring to its members more concrete advantages and a more intimate personal touch. This can only be done through the efforts of its officers and various committees working in closer collaboration with the members and medical profession in general. We take pleasure in stating that the membership of the Society today stands at an all time high. However, we should not be satisfied with that. Our goal is to enroll through the district Societies the entire medical profession of the State. Will not all you members of the Rhode Island Medical Society collaborate with us in achieving this goal? The time of the free lance has passed. What is needed to protect our rights and promote our aims is close organization and systematic teamwork.

Frederic V. Hussey

NEOPLASTIC AND RELATED CONDITIONS IN THE BONES OF CHILDREN

CHARLES F. GESCHICKTER, M.D.

Lesions of the bone in children may be inflammatory or metabolic in nature and if neoplastic, may be benign or malignant and either primary or secondary in origin. The cooperation of the pediatrician with the surgeon or orthopedist and other branches of the profession has greatly reduced the incidence of infection and metabolic diseases in children, and the incidence of neoplasms of the bone has been relatively increased.

Inflammatory Lesions

Both acute and chronic osteomyelitis may be secondary to foci of infection which give rise either to a clinical or subclinical septicemia. Prompt treatment of the primary lesion and the administration of the sulfonamide drugs may abort the infection and make surgical procedures of the bone unnecessary. In children under two years of age the acute infections of bone may be handled by the administration of these drugs alone. With the decline of acute infections, chronic osteitis is seen more frequently in children. These lesions are sometimes distinguished from sarcoma of bone with difficulty. The chief diagnostic features are: (1) a history of low grade infection or previous septicemia, (2) the recurrence of pain, tenderness and fever, (3) in the roentgenogram there is widening of the shaft of the long bone due to increased cortical thickening and an overlying periosteal reaction which is dense, sharply outlined and without a splitting of the layers characteristic of Ewing's sarcoma.

In this group of cases there is no sharp line of distinction between subacute osteomyelitis with an eventual suppuration and Garre's non-suppurative osteomyelitis. If there is point tenderness and fever, and severe pain or if there is a tendency to erosion with the formation of a sequestrum, it is our policy to explore the lesion, confirm the diagnosis with cultures and frozen section, pack the wound with 15 gms. of sulfathiazole, and close the wound without drainage. Successful results are achieved in two-thirds of these cases although a flare-up of pain and tenderness may occur once or twice in the next three months. The sulfathiazole therapy is continued orally during the stay in the hospital but not thereafter. In order to lead to rapid calcification of bone we administer three times daily a tablet containing dicalcium phosphate 12 gr., viosterol 500 units, and an ether of stilbestrol ½ mg. This treatment can be continued for three months regardless of the sex without fear of untoward endocrine effects.

Specific Infections, Metabolic Disturbance — Christian's Disease

The common metabolic diseases of bone in children and syphilis and tuberculosis are easily recognized, and fortunately are increasingly rare. They are rarely confused with neoplasms. A tuberculosis or syphilitic dactylitis is easily recognized, as well as tuberculosis about the joints and syphilitic epiphysis associated with periostitis. Occasionally, however, a gumma of bone may give rise to symptoms and signs simulating Ewing's sarcoma. There may be periosteal reaction with splitting in layers and underlying destruction of bone. However, if the fundamental rule of including a Wassermann reaction among the diagnostic procedures is adhered to, diagnostic errors will be avoided.

Among the group of so-called metabolic bone diseases, one which simulates neoplasm is worthy of mention. This is Schüler-Christian's disease. Christian's disease may be characterized by diabetes insipidus, fever and leukocytosis, and by circular defects in the skull, flat or long bones which respond to irradiation. The osseous defects are the most constant findings. The children thus affected are usually between the ages of 3 and 10. Palpable tumors are felt over the bony defects, exophthalmus may be present and erosion about the teeth, and infiltration of the lungs may accompany the disease. In one rare group of cases the lymph nodes and the spleen may be enlarged. Biopsy is indicated if there is not an accompanying diabetes insipidus upon which to base the diagnosis. The microscopic pathologic tissue contains numerous eosinophiles, large phagocytes resembling Dorothy Reed cells and dense lymphoid tissue. The response to irradiation is rapid and the treatment of lesions as they develop with divided doses of deep x-ray therapy is the treatment of choice. If diabetes insipidus is present posterior pituitary powder should be snuffed into the nostrils once or twice daily to control this symptom.

Gaucher's Disease

This is a congenital malady which is slow to develop clinical manifestations. It produces splenomegaly, rheumatic pains in the long bones and pigmentation of the skin. The reticulo-endothelial system stores a lipoid-kerasin which is apparently the etiologic factor. The long bones of the lower extremities and those of the pelvis are affected most frequently. The femurs have a characteristic flared and rarefied appearance, usually compared to an Erlenmeyer flask. The affected cortex is narrow and wavy in outline, the cancellous structures are rarefied and pathologic fracture may occur. There is no periosteal reaction unless fracture takes place. Small areas of bone destruction in the medullary cavity may be mistaken for osteomyelitis.

The microscopic appearance of the lesions is characteristic. Large phagocytes varying from 20 to 100 microns in diameter with a vesicular nucleus and a finely granular or refractile cytoplasm are embedded in a stroma of reticulum cells and lymphocytes.

Osteochondroma

The most common tumors of bone are the benign osteochondromas. These tumors, often referred to as exostoses, produce bony outgrowths near the ends of the large bones, which are exaggerations of normal bony protuberances forming the attachments for important ligaments and tendons. Although such growths are commonly discovered in young adults of 14 to 25 years, and grow during adolescence, the tumors in most instances have a congenital origin. Gradual growth unaccompanied by severe symptoms is the rule. Mild pain, stiffness or swelling alone is present, and many of these cases are accidentally discovered on roentgenographic examination. The tumor is hard, nodular and fixed to the underlying bone. The x-ray picture shows a cauliflower-like mass with a lobulated translucent top and beneath an osseous pedicle or base which fuses with normal cortical and cancellous bone.

A single osteochondroma of moderate size with slow growth and few symptoms may be left untreated. It is well to have an x-ray examination to check the growth every year or so. Simple excision may be performed for the osteochondromas which produce pain or dysfunction. Osteochondromas are not influenced by irradiation.

Benign Chondroma

Benign chondromas, chondromyxomas or enchondromas occur centrally in the small bones of the hands or feet and are occasionally seen in the spine, in the ribs or in the sternum. Other sites are exceedingly rare. Usually a phalanx or a finger in an adult is affected but multiple lesions of this character with or without the complication of multiple exostoses may be found in children. There may be a family history of the condition. Expansion and thinning of the cortex occurs with a mild degree of pain. In the roentgenogram a characteristic central translucent area is depicted. A frayed shell of bone overlies the central mass, which is traversed by one or more longitudinal trabeculae. Small dense, calcareous particles are usually visible in the tumor. When the presence of a solitary chondroma is suspected in any bone outside of the phalanges or metacarpals, roentgenograms should also be made of the hands and feet. Occasionally, these will show longitudinal areas of rarefaction with irregularities of the overlying cortex, indicating the presence of congenital cartilaginous rests. Chondromas of the small bones of the hand or foot (exclusive of the ox calcis and astragalus) may be cured by thorough excision or curettage followed by cauterization with 50 per cent zinc chloride. On the other hand it is extremely dangerous to remove cartilaginous growths of the larger bones unless the entire area can be safely resected. In these larger bones the tumor will recur rapidly, will transplant in the surrounding tissues and eventually metastasize if incomplete surgery is employed. These growths are not radiosensitive.

Benign Bone Cyst

In children under fifteen years of age a benign bone cyst occurring in the upper metaphysis of the humerus, femur or tibia is one of the commonest tumors of the bone. Frequently pathologic fracture is the first indication of the presence of the disease. Mild pain or dysfunction running a chronic course over a period of two or more years may be elicited in taking a careful history. When roentgenograms are made a central defect appears in the film surrounded by an intact and symmetrically expanded cortex. The cavity in the bone is traversed by irregular trabeculae of dense fibrous tissue. When a pathologic fracture is present signs of re-ossification are seen. Exploration discloses a cyst contain-

ing fluid enclosed by a wall of osseous and fibrous tissue.

Cysts immediately adjacent to the epiphyseal line on the shaft side which have been present for less than a year show an even greater amount of vascularity and more numerous giant cells than are seen in polycystic osteitis fibrosa. These giant cell variants of bone cysts are to be distinguished from true giant cell tumor by their occurrence on the shaft side of the epiphysis in patients under twenty. The prognosis is far better than in a case of typical giant cell tumor and the patient will respond more readily to deep x-ray therapy.

A typical bone cyst discovered in the shaft of a long bone of a child as a result of pathologic fracture may be treated by simple splinting until reossification and healing are secured. Recurrence may take place but such recurrence may also follow simple curettement. If the lesion is explored the lining should be stripped, the shell of bone crushed and the cavity obliterated with bone chips. The patient should take increased amounts of calcium, prosphorous and Vitamin D. The giant cell variant of the bone cyst responds well to deep x-ray therapy in moderate dosage.

Ewing's Sarcoma or Endothelial Myeloma

Ewing's tumor is a neoplasm, occurring in the first two decades of life, which involves most frequently the shaft of the tibia or femur and which may unltimately metastasize to other bones. The disease never primarily involves an epiphysis. It shows the usual malignant symptoms for sarcoma of bone—pain and tumor, followed by dysfunction, extending over a period averaging thirteen months, and may give the systemic reactions of fever and leukocytosis. In the roentgenogram the disease is first seen to widen the shaft of the bone by stimulating new bone formation in parallel layers in the endosteum and subperiosteum, the latter being raised in parallel "onion-peel" fashion. Later the tumor, which arises intracortically, produces areas of bone destruction in the medullary cavity and subsequently in the cortex. Histologically, the tumor is composed of small round cells with dense nuclei and scanty cytoplasm simulating a lymphosarcoma. Histogenically, the growth appears to arise within the lymphatic channels of the haversian system.

In a case of suspected Ewing's sarcoma, deep x-ray therapy should be the first step in the treatment. Rapid shrinkage of the tumor confirms the clinical and roentgenologic diagnosis. Following the maximal effects achieved by irradiation, either resection or amputation should be performed. When such treatment cannot be applied, as in bones of the pelvis, spine or skull, subsequent courses of irradiation should be given. The same type of treatment may be used for Ewing's sarcoma of the upper femur, since amputation will not effect a cure at this level. Irradiation alone rarely suffices to cure this disease. On the other hand combined irradiation and surgery have yielded slightly more than 10 per cent of five-year cures.

Osteogenic Sarcoma

In osteogenic sarcoma of the chondral or sclerosing form the maximum age incidence of the disease is between 16 and 20 years. However, about 25 or 30 per cent of the patients are between the ages of 5 and 15 years. The disease in children under 15 years does not differ in its essentials from that in young adults, nor is the curability by amputation any less. Osteogenic sarcoma usually affects all zones of the bone, medulla, cortex and periosteum in the lower femur or upper tibia in the triangular zone between the epiphysis and the cortex. A characteristic periosteal reaction is seen in the roentgenograms. The symptoms are pain, dysfunction and swelling. Fever and leukocytosis are rare. Both forms of osteogenic sarcoma are radioresistant and amputation is the treatment of choice. Curability is about 15 per cent.

Osteolytic osteogenic sarcoma is a very malignant form of the disease in children and with one exception in a boy of 12 years, we have never cured a case in a patient under the age of 15. Fortunately, only about 10 per cent of these occur under the age of 15 years.

In cases of osteogenic sarcoma with metastasis, the growth of the secondary deposits may be inhibited or delayed by the administration of a tablet containing ½ mgm. of monomestrol, 12 grains of Dicalcium Phosphate and 500 units of Viosterol thrice daily. The patient should be put on a diet with increased amounts of milk, cheese and eggs. The ossification of the neoplasm thus stimulated, reduces its rate of growth and sometimes results in marked symptomatic improvement.

Secondary Malignancy of Bone

The major forms of malignant disease affecting children such as neuroblastoma, leukemia, Wilm's

tumor of the kidney and sacro-coccygeal neoplasms may affect the bone secondarily. Leukemia and neuroblastoma of the adrenal involve the skeleton in a relativley high percentage of cases. The group of sympathetic nerve tumors (known as neuroblastoma, sympathoblastoma or sympathicoblastoma) which involve bone are often described as the Hutchison syndrome. Widespread bony metastases occur at an early age. The skull, pelvis and long bones are affected by small multiple areas of resorption. Involvement of the long bones is on the shaft side of the epiphyseal line. Here the resemblance to Ewing's sarcoma may be marked but multiple foci are usually indicated by the worm-eaten appearance of the bone, and in advanced cases the spine and skull rarely escape. Exopthalmus may be produced by metastasis in the region of the orbit. The primary lesion of the adrenal may or may not be palpated. A presumptive diagnosis of neuroblastoma of bone can be made if the blood count is negative, if the bones are diffusely involved as described above, if there is enlargement of the lymph nodes, exophthalmus, and the child is under the age of 5 years. The lesions are moderately radiosensitive, but cure is out of the question.

Leukemia with bone involvement in children presents a rather characteristic syndrome. There is longitudinal streaking in the bones with an overlying periosteal reaction of "onion peel" type, resembling Ewing's sarcoma. Usually more than one bone is involved. The blood count is characteristic, the total white count is rarely elevated except in the terminal phases of the disease but there is a relative lymphocytosis and the polymorphonuclear cells may practically disappear. In our experience this is a rapidly fatal disease.

Wilm's tumor of the kidney rarely metastasizes to bone but may involve the pelvis or sacral bones by direct extension. Usually a large mass can be palpated and an intravenous pyelogram indicates distortion of the renal pelvis and ureter with displacement. The tumors are moderately radiosensitive, but cure cannot be expected.

Sacro-Coccygeal Neoplasms, Chordoma

Chordoma is a rare and usually fatal disease which recurs but rarely metastasizes. It may occasionally be found in children. Mabrey in a review of the world's literature found only 4 patients under the age of 10. These were all in females and in a sacro-coccygeal location. The tumor has been described in a fetus of 7 months. The author has only observed one case in a patient under the age of 20 years. Chordoma of children or young adults involves the sacrum and produces characteristic erosion in the midline. The tumor arises from remnants of the fetal notochord and has a variable histology but usually resembles an atypical growth of cartilage. Irradiation may result in calcification, but does not inhibit the malignant course of the disease.

A NOTE ON ALCOHOLISM

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Every student of philosophy knows that scientific method consists of four main steps, each step proceeding along logical lines. But how few physicians remember those elementary principles that every senior in college has to know in order to pass his final examinations! What are the four steps by which any process using the scientific method comes to conclusions? They are very simple. First, observations are made. Next, they are classified. Then, on the basis of classified observations, deductions or principles are stated. Finally, on the basis of the principles, predictions are ventured. In mathematics, in logic, in astronomy, in physics, in chemistry, even in biology these four steps can be applied with considerable accuracy and usefulness. But it is more difficult in medicine. for there physicians have to deal with persons and personalities, simple or complex, and often they deal with complicated situations. Even with certain drawbacks it is possible, however, in some fields of medicine to use the four steps of scientific method fairly accurately. This applies particularly to a few infections and intoxications where observations and classifications can be made from which conclusions can be drawn and on which predictions can be based. But it is not true of certain of the more complex entities, or syndromes—some of the neuropsychiatric disorders, for example, the neuroses, or behavior problems. About some of them one has to be more general in order to do the subject justice. Take the condition of alcoholism. What can one say about it? It is an ancient disorder, long known to man, and now, more recently it is beginning to be considered as a disease, or as a symptom of a dis-

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ease, or disorder. How can it be so classified? The answer is simple and basic. By observing the alcoholic individual and by classifying observations, by drawing conclusions based on the classifications and by making predictions based on conclusions. For example, speaking of an alcoholic individual, in most cases it can be said that if his blood alcohol level rises above .35 to .40 grams per 100 c.c. of blood he will be stuporous and if it rises above .50 grams per 100 c.c. he will die. It is by means of such observations that the fringe of science grows. And how are such observations made? By watching the alcoholic and by observing what happens to him. It is only recently that physicians have begun to do this in a methodical way, but interest in this subject is now developing rapidly; physicians everywhere are beginning to look on the alcoholic as a sick person and are beginning to notice what happens to him. They are beginning to consider him as a fit subject for medical care, especially in the field of psychiatry, where the concept of illness is extended from the body to include also the personality.

What does happen to alcoholics? First, of all, as Voltaire might say, they are born. Then immediately one may ask the question, "Are alcoholics the same, genetically, as other people?" The answer, so far as I know, is that they probably are. There is as yet no satisfactory evidence to indicate that alcoholism is an "hereditary" disease any more than, for example, a psychoneurosis is.

But one thing is definite and that is that the roots of alcoholism begin to develop in childhood. If one looks back in the life of a man or woman who later becomes alcoholic, it is not difficult to see that at many points the course of his development was irregular or atypical. The problem drinker was usually a problem child. If you question the mother of the man who becomes alcoholic, or his nurse, or teacher, or employer, they will usually agree on certain significant points about him. He was more sensitive and more suggestible than the average. He was more emotional or he had more difficulty in handling his emotions than other children seemed to have. He was more unstable and more immature than most children. He learned how to get his own way easily, if not by work, then by trickery. He retained baby ways. He was used to getting what he wanted. He could not postpone pleasures. He was impatient or irritable, or had temper tantrums. He couldn't stand disappointments. He had more trouble with bedwetting or he masturbated more than boys ordinarily do.* In school he dodged assignments and evaded issues, but he was likeable. He could get jobs because he was attractive and plausible, but he usually lost them soon. His employer said he could not be depended upon. If sent on an errand, he might stop to have " a few beers" and forget to come back. When he was not promoted or advanced, he would blame others and pout or sulk. He was good company, but again he was not reliable. When he took a girl to a dance, he might get drunk and somebody else would have to take her home. So girls, though they liked him, dared not go for him in a big way unless they were gluttons for punishment. He never quite understood this, or else he chose to forget the reasons why he was not popular and sought after. He developed hypersensitiveness and feelings of inferiority. This gave him a new reason to drink: to forget his feelings or suspicions or resentments. So the pattern grew.

Very early it is clear from his physiological response to alcohol that the alcoholic cannot tolerate alcohol or may be "allergic" to it in a peculiar sort of way. But usually he does not heed this natural warning. Soon his social career shows the effects of alcoholism. The alcoholic tends to spend his money and his appetite on drink, not food. When he is hungry or tired he becomes more dependent upon drinking as a pattern of escape. Instead of food or rest, he takes alcohol and keeps up the vicious circle, once it is established. All this leads to the clinical picture which is the first one that some physicians recognize and is hence the first thing they know, acute alcoholism. Actually the condition is far advanced at this stage, though its progress may not have been recognized.

The condition of acute alcoholism requires medical treatment. The medical treatment of acute alcoholism is uncomplicated and effective. It is based on a few simple principles: (1) Remove the liquor. (2) Institute measures to promote elimination. (3) Restore fluid balance and replace food elements that are usually depleted (minerals and vitamins). (4) Encourage rest and reduce nervousness by sedative and analgesic drugs. Paraldehyde is

* This is an important point and ought to be made clear: masturbation is not abnormal. It frequently is mentioned as a "problem" and may become one secondarily, but usually it is not of primary importance; it may be a symptom of underlying disturbance.

useful in very acute situations. Sodium bromide in large doses is valuable in less acute cases. Aspirin, acetanalid or phenacitin are valuable in relieving symptoms of the hangover. (5) Special measures, if indicated, can be carried out as required, for the clinical condition of acute alcoholism carries with it a number of common complications. Fractures frequently occur (broken arms, legs or ribs) as the result of physical overactivity, poor coordination or carelessness. Alcoholics are very prone to have accidents. Head injuries are especially frequent. The acute alcoholic often suffers from exposure or immersion and pneumonia occurs more often and is more fatal among sickly alcoholics than among normal persons.

As the drinking pattern develops from acute to periodic or chronic alcoholism the nature of the physical complications changes slightly. Instead of fractures, head injuries and pneumonia, one sees alcoholic polyneuritis (or simple neuritis) or digestive symptoms. These may vary so as to run almost the whole gamut of gastrointestinal disturbances from acute gastritis to diarrhea. These complications bear important relationships to diet as well as to the quantity and quality of liquor consumed, or may be the result not so much of drinking as of drinking without eating properly, a process which can end in demineralization and devitaminization of the body and the severe gastrointestinal disorders associated with or caused by dietary deficiency. The presence of skin lesions or other dermatologic signs in chronic alcoholics, such as sub-clinical scurvy and pellagra syndromes, probably result mainly from dietary deficiency and nutritional disturbances associated with excessive drinking rather than from the primary toxic action of alcohol itself, though the latter may and sometimes does occur. Special types of intoxications due to adulterants and contaminants in liquor of poor quality or alcoholic beverages that are badly manufactured also occur. The obvious dangers from "alkie" (190 proof grain alcohol widely consumed in Massachusetts and some other states as a beverage), "smoke", "hootch", bootleg liquor, and so forth need not be emphasized here.

The development of severe symptoms and social difficulties occurs more commonly in chronic than in cases of acute alcoholism. Acute alcoholism occurring once in an individual tends to be overlooked or ignored. It is the repetition or the habituation of the pattern that causes critical eyebrows to be raised. The periodic alcoholic is never a happy or a well adjusted person, no matter how he may outwardly appear. He always has severe internal difficulties or environmental problems from which he is trying to escape by means of alcohol, an outlet which is obviously not successful. Alcoholism always makes matters worse.

A stock question that one may ask (and sometimes very profitably) about any alcoholic is, "What is he running away from?" The answer is "An inner conflict or an outer intolerable situation." Thus it is even more important to find out what the alcoholic's real problems are and to do something constructive about them if possible. Alcoholism is always a smoke screen. But one can attempt to help the alcoholic face his difficulties and try to cope with them more adequately. If that can be done (and sometimes it can), the outlook may not be so gloomy.

Everyone knows the social difficulties into which the alcoholic can get himself, but if one were to list them, the list would only serve as a reminder that these conditions again are symptoms of the immature or unstable personality of the alcoholic, and its poor attempts to function. They are the outer or secondary manifestations of the inner or primary disturbance in the alcoholic personality. This basic principle is too often forgotten, ignored or never realized by the parents or wife of the alcoholic who complain about his behavior, the changes in his personality, his lack of judgment, his outbursts of aggression and his general unconscious destructiveness that is the primary characteristic of the alcoholic personality. The severe alcoholic acts as if he were compelled to destroy something. If he cannot destroy his business, his home or his family, sometimes he turns his destructive aggression inward on himself. That is why, when one speaks of alcoholism as a personality disturbance, or as an illness, one is justified in saying that it is as dangerous as a psychosis to the life of the patient and it is as difficult as a psychosis is to treat, from the viewpoint of the physician.

The alcoholic is a very sick man, emotionally sick, or maladjusted, even before he begins to drink or when he is not drinking. He is usually not legally "insane", but sometimes he is. That is why we can say that the alcoholic "sits down between two chairs". He is not necessarily physically ill or legally insane, yet he is a very sick man with a diffi-

ult and dangerous illness of which alcoholism is the main symptom.

What this illness is physicians do not actually know as yet, but many physicians are studying it and are trying to understand it from three important approaches: (1) chemical, (2) psychological and (3) social. Certain social situations and conditions obviously encourage or precipitate or "produce" alcoholism in some persons. Yet, in others the same social factors do not "produce" alcoholism. Certainly, one type of person (an immature and unstable type) tends to react psychologically by drinking excessively in escape or defeat or addiction patterns. It is also a fact that, whereas some immature people take to alcohol, others do not, but develop aberrations of other types. It is also possible that the alcoholic may be physiologically different from the non-alcoholic person. The alcoholic may have a different blood chemistry, or he may have a different kind of liver function, or he may be "allergic" to alcohol in some sense of that word. Or, he may have less "tolerance" to alcohol (as some persons have low glucose tolerance). The alcoholic may not be able to oxidize alcohol in his tissues as normal persons do, or certain cells of his nervous system may be less resistant to alcohol than is usual. Certainly we do see people in whom alcohol acts as a toxin, just as we see people who are markedly affected by small amounts of alcohol. One man may drink six or eight highballs in a row without showing it, whereas another man takes two cocktails and gets drunk. One way of summarizing what is known and what is not known about alcoholism is to say that physicians know as much about it today as they did about diabetes forty years ago.

Again and finally one may ask, "What happens to alcoholics?" By now the answer may be fairly clear. Alcoholics are subject to specific difficulties of their own which lead them to drink to excess, to special complications resulting from drinking to excess, and to a whole set of social maladjustments that are peculiar to them. It is to be hoped now, and in the future, that one more thing will happen to them: namely, that they will be studied, and that an attempt will be made to treat them scientifically and humanely as sick persons. If this is done, it is quite likely that some progress can be made towards the goal of preventing or controlling this serious public health problem.

CANCER SCROTI

PETER PINEO CHASE, M.D.*

Percival Pott, the great surgeon of St. Bartholomews in London is well known for his description of tuberculosis of the spine and the common fracture of the ankle. Probably many of us remember the term, "Chimney Sweepers Cancer". In 1775 he wrote a paper entitled "Cancer Scroti". We quote . . . .

> There is a disease peculiar to a certain set of people which has not, at least to my knowledge, been properly noticed. I mean the chimney sweepers cancer.
>
> It is a disease which makes its first attack on, and its appearance in, the inferior part of the scrotum where it produces a superficial painful ragged ill-looking sore with hard rising edges. It is generally taken both by patient and surgeon for venereal and being treated with mercurials is exasperated; in no great time it pervades the skin dartos and membranes of the scrotum and seizes the testicle which it enlarges hardens and renders truly and thoroly distempered; from which it makes its way into the abdomen, most frequently indurating and spoiling the inguinal glands.
>
> The fate of these people seems singularly hard; in their early infancy they are most frequently treated with great brutality:—they are stuffed up narrow and sometimes hot chimneys where they are bruised burnt and almost suffocated; and when they get to puberty become peculiarly liable to a most noisome painful and fatal disease.

Pott felt that the disease was caused by the lodgment of soot in the rugae of the scrotum, an area particularly difficult to clean even with our modern soaps and the 18th century was not remarkable for its habits of cleanliness. When someone remonstrated with Lady Mary Wortley Montague because her fingernails were dirty she replied, "You should see my toenails". This anecdote may be apochryphal but it is significant of the age.

Modern experimental cancer work uses highly carcinogenic substances from coal tar so that we can easily see why these poor people developed cancer so frequently. But the profession of chimney sweeping practically ceased to exist many years ago.

In the present century English writers have noted the frequency of cancer of the scrotum in

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cotton mule spinners. These men work about a moving machine in such a manner that their clothes over the lower abdomen and upper thighs are continually saturated with lubricating oil which contains carcinogenic hydrocarbons. As a usual thing there is a history of years of exposure before cancer develops.

Many patients complain of itching before any growth is discovered. Then lumps appear in the scrotal skin and sooner or later these break down forming sluggish ulcers. The growth is shallow, the testicles not being involved except in long standing progressive lesions.

Morley has demonstrated a rich network of superficial lymphatics running all through the skin of the scrotum, across to the other side, to the femoral and inguinal regions and even along the large blood vessels into the abdomen. So metastases can be very wide spread and early.

Graves of the Pondville Hospital has reported twelve cases seen there in twelve years, only one of these remaining alive despite the wide block dissections practiced even including the gland bearing area in the abdomen. He feels that there is a uniform lack of response to external irradiation. The average time of appearance of metastases was nine months from the first discovery of the disease.

Percival Pott himself viewed with the equanamity so much more easy for the surgeon than the patient to achieve the idea of radical surgery when he wrote "But be all this as it may, the scrotum is no vital organ, nor can the loss of a part of it ever be attended with any, the smallest degree of inconvenience; and if a life can be preserved by the removal of all that portion that is distempered, it will be a very good and easy composition, for when the disease has got head, it is rapid in its progress, painful in all its attacks and most certainly destructive in its event."

Three cases of carcinoma of the scrotum have been seen at the R. I. Hospital Tumor Clinic. A 72 year old man in Oct. 1939 had a year old local growth, grade 2, removed so widely that it was necessary to sacrifice a testicle that the wound could be closed. He died at the State Institutions two months later. It is difficult to believe any treatment of his cancer could have saved him. . . . A 74 year old man in 1929 had a local growth, grade 2, and a mass in his groin removed at the Memorial Hospital, New York. He was then given radium and x-ray. In 1937 he appeared here with a swollen testicle. X-ray was successfully given for the relief of pain. The testicle was removed and no tumor found. In July 1941 he was well. This patient, despite the fact that he apparently had metastases when first seen, was well twelve years later. . . A 77 year old man with a 30 year history of growths removed numerous times from his scrotum was operated here in Aug. 1937, an ulcerated scrotal growth and an isolated inguinal gland being excised. There was non-keratinizing epithelioma in both specimens. 16 months later he was well.

G. P., an Italian 64 years old, had a sore on his scrotum which he thought had been there about three months. Before this he had noticed much itching in this region. His past history had nothing of significance except that he had a sore on his penis in youth. Examination showed a corpulent man weighing nearly 200 lbs. although he was short in stature. The only remarkable finding was an ulcerated area on the left side of the scrotum near the perineum measuring about 2 by 1 cm. with a raw red surface and indurated edges elevated possibly ¼ cm. above the skin surface. Both testicles appeared normal, there was no evidence of hydrocele, no glands could be felt in the femoral or inguinal regions on either side. Several of us at first thought the lesion a gumma. The Wassermann was negative and the Hinton doubtful.

Under local infiltrative anesthesia the ulcerative area with a wide margin of skin and the subcutaneous fat down to the fascia and tunica vaginalis was removed and skin closed. The pathological report was epidermoid carcinoma, grade 1.

We were now more careful in enquiring into his former occupation and found that until recently he had been for 25 years a stationary fireman—that is he was exposed to soot and coal dust over a long period. This appears to be a typical case of the historic chimney sweepers cancer of Percival Pott or the mule spinners cancer of modern days.

As he had a tremendous layer of fat over his groins, an unhealthy skin and a short history and, in view of the exceedingly poor results following radical surgery, we felt it advisable to stop with local surgery and watch him carefully for recurrence. A small series treated thus have done better than the heroically treated group.

Summary

A typical case of chimney sweepers or mule spinners cancer is reported.

In the 18th century long exposure to the carcinogenic substances found in coal tar produced cancer in the chimney sweeps. In the latter half of the 19th century mineral lubricating oil began to be used in the mules of cotton mills. After a generation or so numerous cases of the same type of cancer began to appear among operatives of these machines. For a generation now, the automobile and associated industries have exposed large numbers of operatives to prolonged contact with the same type of oils. Possibly modern habits of cleanliness may counteract the old danger but we should be on the watch for skin carcinoma whose early appearance is deceptive.

RECENT TRENDS IN THE CARE OF PROSTATIC MALIGNANCY

ERIC STONE, M.D.

Malignant changes in the prostate invariably originate in the posterior lobe at a distance from the urethra and vesical neck. For this reason 20% of the cases have developed metastases before the growth has reached sufficient size to cause the symptoms of urinary obstruction, which might lead the patient to seek medical advice. This makes the routine search for indurated or nodular areas in the prostate, through rectal palpation, an essential in every physical examination of a man in or near the cancer age.

This matter of early diagnosis becomes the more important as recent technical improvements in total extra-capsular perineal prostectomy, including the removal of the seminal vesicles, makes possible the cure of as high as 60% of such cases. But this operation is contra-indicated if there are distant metastases or if there has been invasion of the bladder base or the seminal vesicles.

Where local or distant extension of the lesion denies the hope of cure, more effective palliation is possible than in the past. Formerly it was the practice to scratch out as much malignant tissue as possible through either a perineal or suprapubic approach. More often than not this merely succeeded in aggravating the local condition. Since the introduction of transurethral resection urinary function is restored simply and for more or less extended periods, adding materially to the patients' comfort.

Following transurethral resection it has recently become the practice to implant radon seeds in the remaining tissue through a simple perineal procedure under topical anaesthesia. Following this, high voltage X-Ray therapy is directed both locally and to distant foci of malignancy. In a small proportion this combination proves curative and in all it retards the progress of the disease and decreases morbidity.

In the incurable the development of intractable pain has been a harrowing feature in the terminal stages. Deep X-Ray therapy has relieved many patients of the pain caused by spinal metastases. Severe vesical pain can now be handled relatively well by alcoholic injection of the nerves through spinal puncture, which has proved more certain in its effect than presacral neurectomy.

Within the year an increasing number of hopeless cases have been remarkably improved both as to symptoms and general health by the removal of both testicles. Orchidectomy has proved more effective than X-Ray castration as the latter fails to eliminate all hormone producing cells. The procedure remains largely empirical as the exact mechanism has not been worked out.

This whole subject of hormonal relations is in a state of confusion and flux. Some authorities still use gonadotrophic materials in the treatment of prostatic hyperplasia. But no success has followed the use of these or other hormones in malignant prostates. However, the cases which have been benefited by orchidectomy suggest that there is some hormonal influence, as yet undemonstrated, which acts on the tumor cells.

It is obvious from this brief review that no dramatic developments have taken place during the past few years in this segment of urology. Nevertheless, the minor advances made here and there have distinctly improved the prognosis in prostatic malignancy both as to cure and as to the comfort of the incurable.

But these advances have further accented the importance of early diagnosis. The crucial factor, if any decent prognosis is to be expected, is the alertness of the family physician in recognizing early suggestive changes in the physical characteristics of the prostate even before any symptom indicative of genito-urinary disease has appeared.

THE RHODE ISLAND MEDICAL JOURNAL
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I have more fully learned at least three principles since I have been in Paris: not to take authority when I can have facts; not to guess when I can know; not to think a man must take physic because he is sick.

Oliver Wendell Holmes.

ANNUAL MEETING OF THE STATE MEDICAL SOCIETY

The one hundred and thirty-first annual meeting of the Rhode Island Medical Society will be held at the Medical Library Building, 106 Francis Street on Wednesday and Thursday, June 3 and 4, 1942. Notices of the clinics to be held in the morning and scientific sessions to be held in the afternoon and evening appear elsewhere, and have been arranged to be attractive to all medical men in the state. With traveling becoming increasingly difficult and attendance at distant meetings correspondingly inconvenient, the state meetings this year should be of particular interest to physicians eager for the stimulation of meeting with their colleagues and hearing authoritative discussions related to advances in medicine and surgery. With numerous physicians leaving our communities for military services, there is imminent possibility that those remaining for civilian practice may be forced to cover wider fields than has been their custom in the past. The need for strictly up-to-date knowledge on clinical problems not previously encountered becomes, therefore, the more urgent this year. This present emergency has made us all more alert, and consequently a much larger attendance at these June meetings seems likely.

The commercial exhibits are gradually assuming a more and more important place at our annual meeting. Last year because of limitation of space there were some comments that it was difficult to enjoy the exhibits. This year in an effort to provide more space and the most attractive surroundings, arrangements have been made to hold all exhibits on the basement floor of the Medical Library Building. Quite apart from the attractive displays furnished by our commercial exhibitors, the Committee on Exhibits has completed plans to make the exhibit hall not only a place of scientific interest but also of relaxation and refreshment for members and visitors. The Program Committee has allowed extra time during the scientific sessions to permit visiting the exhibits. Aside from the enjoyment and stimulation which this important part of our state meeting will provide, it must be remembered that the financial contributions of our exhibitors do much to make the annual meeting of the State Society a success.

PLAN TO VISIT THE EXHIBITS ON THE BASEMENT FLOOR. ENJOY THE HOSPITALITY OF THE EXHIBIT COMMITTEE, AND REMEMBER TO REGISTER WITH EACH EXHIBITOR SO THAT HE MAY BE ENCOURAGED TO BE WITH US AT FUTURE MEETINGS.

REORGANIZATION

It is 130 years since a group of 49 physicians led by Amos Throop founded the Rhode Island Medical Society. In America that makes it a reverend institution. It was 36 years later before the largest city of our state felt the need of a local society. The American Medical Association is comparatively a young upstart.

For the first 85 years of the state society's existence membership in it was essential before a physician could join the Providence Medical Association. For nearly 40 years now, the situation has been reversed; new members first join their local society before they are eligible to the state.

In the last quarter century the Providence Medical Association flourished and the Rhode Island Medical Society, to say the least, has not markedly done so. There are reasons for this. The bulk of the medical population and naturally most of the outstanding men have been in Providence. The Rhode Island Medical Society, arranging its meetings so that the members from the farthest parts of the state could share, for some time had four meetings yearly and of late, only two, held in the day time. The local society has had nine meetings yearly and these are held in the evening, easily attended after a man has done his day's work. The large and enthusiastic gatherings have stimulated the presidents to a remarkable series of programs.

But the methods of government of the two organizations should be considered. They explain a good deal. The dominating governing board of the senior society is the council, consisting largely of the past presidents who are members for life. Usually they have been president first of their local society so they are no longer young. Age has wisdom but youth enthusiasm. Possibly the latter is more important for progress. One of the state councillors has been in office 28 years. One of the governing board of the Providence Medical Association has been in practice less than ten years. Elections to the latter board are for five year terms so that the make-up is continually changing.

Then about five years ago the Standing Committee of the Providence Medical Association, consisting of the five most recent past presidents and the officers was changed to an executive committee of fourteen. This up to the present has certainly been democracy at its best. And with the acquisition of a tremendously efficient executive secretary the management of the extra-clinical activities has more than kept pace with their multiplication and increasing importance.

But — easily the largest part of these problems, legislation, conditions in industry, public health matters, to mention a few, are distinctly of state wide interest and not peculiar to the local situation. It is illogical to leave them to the kindly helpfulness of the Providence Medical Association.

Since the fine Medical Library was built in 1912 the large expense of maintenance has required practically all the funds of the state society. The local society whose members are of course the great users of the place has paid only small amounts yearly to the building and has been comparatively opulent.

For some years the Providence Medical Association has been larger numerically than the Rhode Island Medical Society; but during the past year enthusiastic work has increased the enrollment of the latter until it has reached an all time high and has climbed well above that of the local group.

So the parent organization is growing bigger, better organized and is showing a more hustling spirit than it has for years.

But some of its strongest and most active members have been doing their best work and work that is state wide in its scope in what should be their secondary role as parts of the local group.

It is anomalous situation and we rejoice that it is being recognized and trust that it will soon be remedied.

SPEED UP

The Procurement and Assignment Service for Physicians, Dentists and Veterinarians, at a meeting held in Washington on April 24th, announced that there soon is to be established in each State a Board for stimulating medical recruiting to meet the definite emergency that now exists.

The Army proposes to increase its present medical personnel by 5000 doctors before July 1, 1942 and by 14,000 by January 1, 1943.

The Recruiting Boards in each State will consist of a Medical and a Line Officer, whose duties indicate a close working cooperation with the State Chairman and the Committee on Procurement and Assignment.

Lt.-Colonel Guy W. Wells, M.C., has been appointed as the Medical Officer, and Lieut. Paul N. Fontaine of Westerly, as the Line Officer, for Rhode Island. An office will be established with the necessary clerical help and a vigorous effort will be made promptly to secure Commissions both for those doctors who volunteer and those who are classified 1-A and apply for Commissions.

At present, not only those in the draft age but M.D.'s up to 45 years of age are urgently needed to fill the quota above mentioned.

This action of the Procurement and Assignment Service, in appointing State Recruiting Boards, will not only stimulate voluntary enlistment amongst doctors available for Military Service, but will greatly expedite the final Commissioning of these men. Authority, vested in these Boards, to obtain physical examination of candidates, to recommend those suitable for Commissions in the grades of Captain and Lieutenant and to forward the completed papers promptly to the Surgeon General's Office, should lessen the whole proceeding from the somewhat discouraging two or three months, to even a less number of weeks.

The Surgeon General's Office must act, however, on all doubtful cases, upon those involving a higher grade than Captain and upon the age group 45-54.

The Adjutant General's Office is responsible for Commissioning and assigning all Officers.

With this new plan for a Recruiting Board in Rhode Island to be put into immediate effect, it behooves those of us in the age groups up to 45, to reassess our individual situations in relation to prospective Military Service and be ready to meet the question when it is brought to us, as it surely will, and now very promptly.

The Army needs us — Now!

EXTRA-PROFESSIONAL ADVICE

Overhearing the conversation of some of our associates reveals that they don't like our allies or their efforts in this war. And some do not like our government.

Now these are the only allies and government available to us and we have just got to "like 'em or lump 'em".

In the dark days of the Civil War Charles Francis Adams was doing monumental work in England as our ambassador, assisted by his son, Henry. His other son Charles was a cavalry officer fighting against the South. This advice from Henry to Charles can well be taken to heart by us now.

"I am not a little sorry to see that you are falling into the way that to us at this distance seems only to be the mark of weak men, of complaining and fault finding over the course of events . . . . For my own part, I tell you fairly that all the gossip and senseless stories that the generation can invent shall not, if I can help it, shake for one single instant the firm confidence which I feel in those who are guiding our affairs. You are allowing your own better judgment and knowledge to be overruled by the combined talk of a swarm of people who have neither knowledge nor judgment at all."

THE NEW CANCER CONTROL BILL

In this world we are seldom called upon to "suffer an embarrassment of riches." But certainly now with the passage of Bill 916 by the Legislature, cancer control work in Rhode Island will find itself surfeited with wealth! Up to now work among the indigent has been carried on efficiently on a yearly budget of barely 7,000 dollars. Hospitalization and treatment have been paid for out of funds raised by the Women's Field Army. No one suffering from cancer in the ranks of the poor has been refused aid. The three Class A Tumor Clinics in out State have functioned well. And in addition a campaign of cancer education has been carried on more or less continuously in the Press, over the Radio, by distribution of literature and by talks on cancer by medical men of the State.

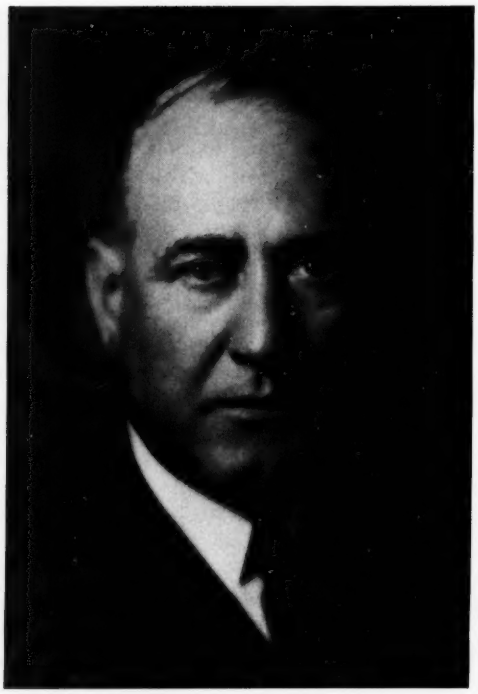
There is no doubt that the Bill was introduced with the best possible intentions — but it was introduced without a sound knowledge of what is already taking place.

The Legislative Committee of the Rhode Island Medical Society opposed the Bill on the ground that the field was already covered by private agencies and that at this time particularly it did not seem advisable to establish a State Division of Cancer without a very careful study of the whole problem by health and medical authorities. The protest was addressed to the Honorable Francis X. Asselin, Chairman of Finance Committee, House of Representatives with a request for a hearing and nothing came of it!

The purposes of the Bill are set forth in several sections. In section one the State Director of Health is directed to formulate a plan for the care and treatment of indigent cancer patients after "consultation with physicians designated by the President of the Rhode Island Medical Society with other interested organizations and with such experts and non-experts wherever located as he may deem proper."

In section two he is directed to "formulate an educational plan for the purpose of *preventing cancer*" (italics ours). Rather a large order for any Director of Health, but one certainly we all hope will be successful.

The third section deals with financial aid to indigent cancer patients, to help them obtain diagnosis and treatment in approved Hospitals. There is no question that the purposes of the Bill are excellent. There is no doubt that with a generous appropriation by the State, the scope of cancer control can be greatly enlarged. But there is a doubt in our minds as to advisability of dumping the whole problem into the lap of the Director of Health already burdened with many problems without giving him the help of a permanent consultative body. We will continue to hope that the Legislature at its next session will remedy this lack in a piece of legislation that is pretty certain to meet the approval of the vast majority of the citizens of our State.



FREDERIC V. HUSSEY, M.D.
President
R. I. Medical Society

An especial effort is being made by Dr. Hussey, the officers and the committees of the Society to make the Annual Meeting interesting and attractive. A new feature will be entertainment in the late afternoon of Wednesday, June 3rd, the first day of the meeting. After the scientific session at the Medical Library, the officers will invite the members and their wives to a social hour at the Agawam Hunt to meet the invited guests and delegates from other state societies. After this all the members of the Society may have the privileges of the club for dinner by themselves or to entertain guests. If the weather is hot this should be a welcome change to cool, fresh air.

In view of the war and the economic stresses that will follow, causing unforseeable changes in medical practice, it is obvious that the State Society should be strong and efficient. The officers and committees arranging the program are making a special effort this year to make the Annual Meeting attractive. A committee under the chairmanship of Dr. Hammond is working hard preparing a proposed revision of the Rules and By-laws of the Society. During the past year the officers have met each month for prolonged sessions to discuss improvements in administration. May we urge those of you who do not usually attend Annual Meetings to try this one for two full days and see if it is not worthwhile.

William P. Buffum, *Secretary.*

VICTOR COEN
of London, England
Speaker at Annual Dinner

RHODE ISLAND MEDICAL SOCIETY

131st Annual Meeting, June 3rd and 4th, 1942

WEDNESDAY, June 3rd
MORNING

Peters House Auditorium, Rhode Island Hospital

10:30 to 12:30. *Surgical and Medical Clinics.*

1 o'clock, Luncheon, Nurses Home

AFTERNOON

Rhode Island Medical Library

2:15. *Business and Introduction of Delegates from other State Societies*

New Phases of Cancer Research

DR. HERMAN C. PITTS, President of the American Society for Control of Cancer.

The Need for Fracture Knowledge in Wartime

DR. ROBERT H. KENNEDY, Associate Clinical Professor of Surgery, College of Physicians and Surgeons. Attending Surgeon Skin and Cancer Unit, N. Y. Post-Graduate School and Hospital, New York.

Intermission to see the exhibits.

The Practitioner and the Allergy Problem

DR. ROBERT A. COOKE, Assistant Professor of Clinical Medicine, Cornell University Medical School, Assistant Attending Physician, New York Hospital, Chairman of the Advisory Board of American Allergists.

EVENING

5:30 to 6:30, Agawam Hunt, East Providence
Social Hour

at the invitation of the President and Officers for members, wives and guests. Afterwards the privileges of the Club are extended to members of the Rhode Island Medical Society, wives and guests to arrange for dinner.

8:30, Rhode Island Medical Library

Arterio Sclerosis, Its Causes

DR. TIMOTHY LEARY, Emeritus Professor of Bacteriology and Pathology, Tufts Medical School; Medical Examiner for Suffolk County, Boston.

THURSDAY, JUNE 4th
MORNING

St. Joseph's Hospital

8 A. M. *Operative Clinics.*

10 to 12:30. *Dry Clinics.*

12:30. *Luncheon.*

Charles V. Chapin Hospital

10:30 to 11:30. *Thoracic Clinic.*

11:30 to 12:30. *Colored moving pictures of* ASEPTIC TECHNIQUE IN A CONTAGIOUS HOSPITAL.

12:30. *Luncheon.*

AFTERNOON

2:15, Rhode Island Medical Library

Arthritis

DR. FRANK B. CUTTS, *Assisting Visiting Physician* Rhode Island Hospital

Psychiatric Aspects of Selective Service

DR. ARTHUR H. RUGGLES, Superintendent of Butler Hospital; President of American Psychiatric Association.

Intermission to see Exhibits

Military Aspects of Thoracic Surgery

DR. EDWARD E. CHURCHILL, John Homans Professor of Surgery, Harvard Medical School; Surgeon in Chief, West Surgical Service, Massachusetts General Hospital.

Presidential Address

DR. FREDERIC V. HUSSEY, President of Rhode Island Medical Society.

Installation of new President and Officers

EVENING

7 o'clock. Annual Dinner. Agawam Hunt.

DR. HALSEY DEWOLF, Anniversary Chairman

MR. VICTOR COEN, Barrister and Lecturer of London, England, will address the Society on

Hitler, Napoleon and Philip 2nd of Spain

RHODE ISLAND MEDICAL SOCIETY OFFICERS

President FREDERIC V. HUSSEY
1st Vice-President JOHN PAUL JONES
2nd Vice-President CHARLES V. GORMLY
Secretary WILLIAM P. BUFFUM
Asst. Secretary MORGAN CUTTS
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ALBERT A. BARROWS
Sub-Committee, Annual Clinics
CHARLES BRADLEY
Sub-Committee, Commercial Exhibits
EDWARD F. BURKE
RALPH L. DILEONE

DEFENSE MEASURES TAKEN BY RHODE ISLAND HOSPITALS

All hospitals in the state have arranged effective black-outs and have geared themselves to receive a sudden and large number of injured persons, the Hospital Association of Rhode Island reports. This preparedness has been a serious financial problem ranging from $100 in smaller institutions to over $2000 in the larger ones. The increased tempo of industry, often with inexperienced persons performing a hazardous task, is recognized as a potential source of accidents even though no bombs may fall. Hospitals that have offered a two-year interneship have rearranged schedules to allow maximum service in the year following graduation, before Military Service.

Many doctors hardly realize the detail involved in these defense measures. The two largest hospitals in Providence and the Memorial in Pawtucket have been asked by the JOURNAL for a summary of their preparations. In general these are very similar. We are printing the report from the Rhode Island Hospital in considerable detail, and are supplementing it with excerpts which are of especial interest from St. Joseph's and the Memorial.

RHODE ISLAND HOSPITAL

Instructions have been distributed to the wards and to all other buildings on the premises used for hospital purposes, just what to do in the case of bombing, whether it occurs during the day or night, or in the case of explosions or other catastrophes due to sabotage. Provisions for a black-out for the whole hospital have been made and already two trial blackouts and one official blackout have been carried out.

Internes and residents are to report, one to each ward and the balance to the Accident Room when the air-raid signal is given. All other employees are to report to their usual places of work. If this occurs at night, all employees who possibly can are asked to return to the hospital. As yet no cards of identification have been issued so that the personnel of the hospital would not be held up on the streets, but it is expected that such cards will be issued.

Specific directions have also been issued as to what procedures will be followed in different parts of the hospital in the case of air-raid warning. If the warning comes at night, all unnecessary lights are to be turned off, shades pulled and other black-out provisions executed at once. Many of the employees, particularly those in the Maintenance Department, will act as air-raid wardens to take care of incendiary bombs. The top floors are provided with shovels, sand and special fire extinguishers. Certain men will be assigned to stations where they can turn off gas, water or electricity if it is necessary in case of actual bombing. A pump has been supplied and is being installed in the boiler room to increase the water pressure in case it falls due to heavy fires in other parts of the city. Each maintenance man and other personnel of the hospital have specific duties to perform.

Fire brigades are being formed, and new fire rules are about to be posted in all parts of the hospital to take care of fires due to any cause. Demonstrations have been made by the Providence Fire Department for the benefit of such personnel as need to be instructed on how to use fire-fighting apparatus installed throughout the hospital, while waiting for the Fire Department to arrive.

Specific directions have been set up in the Admitting and Accident Department as to how casualties should be handled.

Through personal subscription money has been provided for transportation splints, first-aid kits and equipment for certain station wagons to fit them up for ambulance purposes. There are available, including our regular ambulances, eleven vehicles for bringing patients to the hospital or transferring them wherever they should be taken. The Red Cross Motor Corps will drive all the beach wagons but the regular ambulances will be manned by the hospital drivers.

In case of air-raid signals, all patients are to be moved away from windows. They are not to be moved out of the ward, however, until specific directions have been gvien. Specific directions have been issued as to how these patients are to be moved from one part of the hospital to another. A microphone has been installed in the Superintendent's office and patients will not be moved unless orders are received from this office by some member of the administration. It will also be possible to give other specific directions to different parts of the hospital over the loud speakers now in operation.

An emergency medical staff has been selected who will come to the hospital at once in the case of air-raid signal. Some fifty physicians have been selected from different departments to respond to this call. Others will be called if necessary. For the most part, patients will be directed through the

Admitting Department to the wards. Cases in which emergency operations are necessary will be routed directly to the Operating Room. Minor injuries not requiring admission will be cared for in the Admitting Department.

Two casualty stations, based on the Rhode Island Hospital, have been established, one at the Rhode Island Hospital and the other at the Brown University Infirmary. Four physicians and four nurses are to report at once to the Rhode Island Hospital and four physicians and four nurses to the Brown Infirmary. Casualty station equipment and first-aid kits purchased by the city will be soon distributed to these casualty stations.

Since last September in the Nursing Department, Red Cross first-aid courses have been given to 227 nurses; 58 women have been trained as Red Cross Nurses' Aides, and 44 as Red Cross Gray Ladies. Refresher courses have been given to 44 graduate nurses. The training of Gray Ladies and Nurses' Aides, and the refresher courses for graduate nurses is not only a valuable community service but it is going to be particularly valuable to the hospital in view of the fact that the nursing service will undoubtedly be very much depleted as time goes on.

Everything is being done to prepare the hospital for its share of responsibility if disaster should occur so that patients will be adequately and efficiently taken care of.

The new blood bank began operation May 4. Each service will be held responsible for maintaining the supply. In an emergency a service will be allowed a debit of four flasks. If such a debit is not made up at the next donation period that service will not be able to employ the Bank's service.

Blood will be taken from donors on Tuesdays, 4-6 p. m.; Thursdays, 3-5 p. m.; Fridays, 7-9 p. m. Donors shall be scheduled for these periods through the Information Desk. Donors should be instructed to report fasting for four hours. (They should drink plenty of water.) An effort should be made to secure at least three donors for each transfusion. Blood not used will be converted to plasma which in turn will be available to the service supplying the donor.

When blood is wanted a special requisition slip must be filled out and sent to the Blood Bank laboratory with sample of patient's blood. The Interne will be notified when the blood is ready. He must personally call at the bank to receive the blood and sign for it. It should be carried to the ward with as little agitation as possible.

Blood will be labeled with group and color as follows:

Yellow — A	Blue — B
Green — AB	Red — O

The pink sheet attached to the flask is to be completed by the interne and attached to the patient's chart.

Whenever possible the Blood Bank should be given 24 hours' notice.

Plasma will be available on a similar debit-credit basis when and if it accumulates from the donors sent by the service.

St. Joseph's Hospital

In December of last year when the call came for activities of Defense work, the Board of Trustees of the Hospital authorized a committee to proceed with the plans for organization and equipment in anticipation of services that might be necessary to meet any event in which the Hospital might be called upon to render services. As like other of the major hospitals in the community, St. Joseph's Hospital was designated as a so-called evacuation center and its facilities including the medical, nursing and employee staffs were organized in preparation to serve as the occasion might warrant.

The Hospital has been organized into an Evacuation Hospital, patterned very closely along military lines. Facilities are provided for the establishment of a complete surgical unit in full operation in certain sections of the Hospital. Provisions are also made for the reception and evacuation of patients along certain definite lines with special regard to walking wounded, operative cases and slightly wounded. Provision is also made for the reception and treatment of gas cases. Added facilities include the use of the Peace Street School, granted by the Providence School Committee and the use of the Nurses' Home for overflow. Provision is also made for the use of St. Aloysius Home, if necessary. Provision is also made for traffic routes to and from the vicinity of the Hospital, as well as parking facilities for ambulances serving the Hospital from other units.

In preparation of these plans, one thought has been uppermost and that is the probable necessity of continuing a certain amount of our regular hospital duties and care of the ordinary civilian needs. The plans as far as possible will not interfere with or interrupt the various hospital services as they now exist and function. It is proposed that the men in charge of the services at the time of an emer-

gency will continue to care for and accept on their services new cases classified for admission according to the regular hospital procedure as it now stands. In the event of any one service being overtaxed, the Attending Physician has in reserve all of the other personnel of the department who has been called upon to supplement the work at hand. Endeavor has been made with the thought to making necessary supplies in full stock and to anticipate emergency needs for special requirements as blood and plasma. In regard to the latter, the Hospital is attempting to establish a list of blood donors and it is hoped that some arrangements may be made either in our Laboratory or in conjunction with some other unit, in order that a blood bank and blood plasma reserve might be accomplished.

There have been numerous meetings of the Active and Associate Staffs, together with the Nursing and Employee Departments with discussion of the various problems that may develop and it is felt that the Hospital is quite ready to serve efficiently in any emergency that may lie before us.

Memorial Hospital

Our position in the midst of an active industrial and defense area requires that we take action to insure suitable emergency treatment to a large number of injured persons within a short period of time.

This War does not necessarily mean that we shall be subject to enemy attack, however, we must recognize the ever present possibility of sabotage and large industrial accidents that may be expected as industry continues to expand often with new and inexperienced help.

The Hospital has in the last few months taken steps to insure adequate supplies being on hand to meet the sudden needs of a large accident and we believe that with all departments pulling together we could handle a sudden influx of accident victims with reasonable dispatch during the day.

Our chief concern now is to prepare in advance for a possible demand at night that would far exceed the ability of our night force to cope with, due to limited personnel and inaccessible supplies.

The Visiting Staff have just been regimented into squads to cover surgery and accident room, shocks and decontamination, and x-ray interpretations.

It is proposed that these squads be broken down further, as we progress, on a trial and error basis to determine just what is most adaptable in view of expected depletion of our visiting staff for military service.

The Blood Bank was established at this Hospital a few years ago but did not function in a manner adaptable to wartime needs and as a result, this Department has been completely reorganized and we are at this time banking blood from clinics held two days per week. Our procedure follows that established at the Massachusetts Memorial Hospitals in many respects, except that we are using commercial solutions and equipment for both blood banking and plasma storage.

CLINICAL-PATHOLOGICAL CONFERENCES OF THE RHODE ISLAND HOSPITAL

Dr. B. Earl Clarke, *Editor*

CASE RECORDS AS USED IN THE BI-WEEKLY OPEN MEETINGS.

Case from the Tumor Clinic *presented by* Dr. Charles J. Smith

Mrs. E. C. Housewife Age 30 White.

Admitted to hospital December 18, 1940.

Complaint: Swelling and pain left lower jaw two weeks' duration.

General health good except for appendectomy four years ago. Appetite good. Menses regular. No undue discomfort.

Father — alive and well.

Mother — dead, cause unknown.

Two brothers and two sisters — alive and well.

Husband — alive and well.

One child — daughter — alive and well.

No history of T. B., cancer, cardiorenal or diabetic diseases.

Physical Examination:

Temperature 99.4 Pulse 95 Respiration 22.
Blood Pressure 122/66.

General physical examination negative except for swelling of lower left jaw. Mucosa of the mouth and teeth in healthy condition. Lower left second molar missing — extracted two years previously. Left side of mandible shows diffuse swelling causing asymmetry of face. Swelling hard and fixed extending from angle of jaw to first bicuspid area of same side. Mass slightly tender under pressure.

Laboratory:

X-ray examination shows an area of decreased density in the left side of mandible and the A. P.

view shows an expansion three times the normal thickness of the bone but no evidence that the cortex has been broken, though markedly thinned. The appearance is that of a benign tumor the exact nature of which cannot be determined from the films alone.

Blood Wassermann — negative.

Urine — negative.

Because of the extensiveness of bone destroyed a biopsy was performed, section being taken from within the oral cavity.

Discussion by Dr. Charles J. Smith

From the abstract on Mrs. E. C.'s case, we are dealing with a healthy young married woman whose only complaint was an enlargement of her left lower jaw, and painless except on pressure and then only slightly so.

The swelling was firm and hard, extending from the angle of the jaw forward to the bicuspid area.

There was no evidence of acute infection.

The oral cavity was in a very healthy condition and little dentistry had been done.

The lower left second molar, however, was extracted some time previously without complication.

X-ray pictures were taken of the jaw and they disclosed extensive bone destruction, not of the type of chronic osteomyelitis, but a well circumscribed area involving the whole body of the mandible from angle to first bicuspid tooth.

With the evidence of the missing molar in this area, this condition very reasonably could be diagnosed as an enlarged root cyst that may have resulted from the infected molar.

To make a diagnosis of these jaw lesions from x-ray films alone is rather questionable and dangerous, for many may be the benign dental cysts resulting from chronic infections while others may be the result of transitional changes of cells of embryonic tissue which result in bone destruction by extension.

The latter are dangerous lesions. They may appear well circumscribed in the X-ray film but upon operation they show finger-like extensions that most necessarily must be removed. Such a situation was shown during operation of the case in question.

Biopsy demonstrated in this case that we were dealing with a Localized Osteitis Fibrosa.

This condition is generally found in patients less than twenty-one years of age. It is supposed to be a reparative process preceded by a destructive process.

This bone disease was first described by von Recklinghausen in 1891. More recently there has been a greater consideration of bone disturbances that appear to be connected with parathyroid activity; Geschickler, Copeland, Hunter, Turnbull and Thoma have recognized this disease as it affects the jaw bones and particularly the mandible.

Osteitis fibrosa affects children and young adults. Like all slow-growing diseases, it may not be recognized until there is some departure of the bone from the normal appearance in the X-ray. There may be an apparent swelling without pain, redness, or rise in temperature.

Osteitis fibrosa may be associated with a hyperparathyroidism, an excessive amount of calcium in the blood serum, but quite often it may occur without parathyroid activity. It may be circumscribed, locating in a single bone, and very often it affects the long bones. The skull may be involved and the mandible is more frequently affected than the maxilla. Most often, when this disease occurs in the jaw bones, its presence is noted by a member of the family or by a friend who notices an asymmetry of the facial contour. This is regrettable, for when changes in the facial appearances occur, much bone disturbance has already taken place, and operative procedure may have to be quite radical.

The progress of the condition is painless and differential X-ray diagnosis is difficult. Without demonstrations of similar disturbances by the X-ray in other bones of the body, a biopsy should be made before surgical procedure is attempted. The clinical observation, coupled with X-ray interpretation and the results of a biopsy, govern also the amount of surgery necessary to eradicate the disease.

Case Report: The patient, a young married woman, the mother of one child, has been well except for the local condition of which she has complained. The radiogram shows that changes have occurred in the mandible. There was no demonstration of the disease in other bones. A biopsy was taken and examined by Dr. B. Earl Clarke, Pathologist at the Rhode Island Hospital, and by Drs. Mallory, Warren and Bennett of Boston, and all agreed that complete resection of the mandible was indicated. When such a decision has been made, it is the obligation of the surgeon, or the oral surgeon, and the dentist involved, to collaborate; for the post-operative result is successful only if successful appearance and function are attained. Therefore,

where radical resections of the jaw are contemplated, the cooperation of the surgeon and the dental surgeon are truly indicated.

After a decision has been made by the surgeon, he marks out on the radiogram just where the lines of resection will be made, and it is then the duty of the dental surgeon to prepare the necessary splints to retain the parts in their proper relationship. Most fortunately, at the Rhode Island Hospital there is a close cooperation between the Surgical Services and those who serve as Dental Surgeons. In this particular case, Drs. Robert Baldridge and Emery Porter collaborated with the writer. Because of their collaboration, splints had been prepared previous to operation, and were partially inserted at the completion of the operative procedure.

Osteo-periosteal or bone grafts of course may not be attempted for quite some time after such resections. Such grafts must be inserted in a sterile field, and therefore must be done extra-orally, when there is no possible chance of infection from the oral cavity.

To summarize, the cause of this disease is unknown; it is supposed that it may be the result of injury, a low grade inflammatory condition, or a disturbance of the function of the endocrine glands.

Dr. Gormly: "When the tooth was removed, did you find the aching due to bone disease or tooth disease?"

Dr. Smith: "Bone disease."

Dr. Cutts: "Would it have been advisable to put in a metal piece to support the jaw?"

Dr. Smith: "No, if we did, we would never in the course of things get around to putting in a bone graft."

Dr. Cutts: "Are these tumors sometimes called an epulis? Or giant cell tumor?"

Dr. Clarke: "No, this is an entirely different lesion."

Dr. Baldridge: "Surgery of the jaw is a relatively simple matter. The difficult part is the after care. It is not an operation which you should do without an expert dental surgeon. Another point is that it is very difficult to decide just how much surgery to perform. We planned a certain dental procedure, but after the surgeon went in and removed the part of the jaw which distinctly showed by X-ray as being the part affected, he scraped away bone for one-half inch which did not show by X-ray.

Another point was whether the periosteum could be saved. I feel that in disease such as this, it is practically impossible, because the cortex of the bone is so thin. Surgery should be conservative and done much earlier in the game.

Discussion by Dr. Clarke

We studied this specimen a great deal and had considerable doubt about it. We had three or four Boston men advise us as to therapy and it seemed to be the opinion of all of them that a radical resection was indicated. X-ray treatment would be of no help. One doctor told of a case that recurred when they thought they had removed all the tumor. While considered benign it can recur. Histologically it is composed of bone and fibrous tissue. These lesions have been called "ossifying fibroma," "fibrous osteomas" and "fibrosing osteitis." They occur frequently in the jaw and seldom anywhere else. While locally very destructive they do not metastasize. I do not believe that it should be considered as a part of osteitis fibrosa cystica or von Recklinghausen's disease.

CASE PRESENTED BY DR. LOUIS I. KRAMER

W. J., Male Age 64 years W.P.A. Laborer.

Admitted to the hospital December 31, 1940 complaining of general malaise and cough of four-days' duration. The cough was productive of colorless sputum and at no time was it blood streaked. In spite of the cough and general malaise the patient managed to continue at his work until the day of admission. He has had no shaking chills or pleuritis pain, although he did feel chillier than usual.

Past History: Married 31 years. No children. Wife living and well. He has been a heavy smoker and a heavy drinker until 3 years ago. No weight loss. He enjoyed good health up to present illness.

System Review: Head, ears, nose and throat negative.

C. R. No chronic cough, pleurisy, asthma, dyspnea, orthopnea, angina, and edema.

G. I. Essentially negative.

G. U. Penile sore at 20 for which he took mercury by mouth for 18 months. G. C. at an early age. For several years before admission to hospital he has had slight difficulty in starting urinary stream.

N. M. He had a "stroke" 3 years ago. Sudden in onset and associated with weakness of legs. He had no complete paralysis and improved sufficiently so that he was able to work as a laborer.

Physical Examination: T 99:5 P 100 R 24 BP 140/72.

Well developed and well nourished white American, appearing acutely ill.

The pupils were slightly irregular and fixed to light.

Chest expansion equal, dull to percussion posteriorly on the right with B. V. and B. S. between T 3 and T 5 and distant rales below T 5 and in the axilla. Mention of friction rub in this area was made in discharge note. Heart normal in size, regular, rapid. The sounds were slightly muffled and no murmurs were heard.

Abdomen normal to inspection and palpation.

Rectal — several external hemorrhoids were noted. No masses and no abnormality of prostate noted.

Reflexes — cremasterics. Absent in knees. Negative Babinski. Absent sense of position and movement in toes.

Laboratory: Wassermann and Hinton positive.

Hgb. 16 grams on admission. 12 grams 6 days later.

R. C. 5,200,000. W. C. 26,400, 27,200, 34,400. Differential on admission was 82% PMN and 18 S. L.

Urea nitrogen 13, 15, 20, 46, 51, 73, 73.

Creatinine 5.8, 6.3, 9.2, 9.2. CO_2 40 and 39.

The blood culture and sputum were both positive for type 1 pneumococcus.

Urinalysis — sp. gr. 1.017, 1.010. Sugar 0. Albumin 1 to 3 plus.

No casts. W. B. C. 3 to 5. R. B. C. 20 (after 4 days of sulfathiazole treatment). Sulfathiazole crystals were present.

Chest X-ray 12/31/40:

Examination of the chest shows an extensive area of increased density in the right lung extending from the diaphragm to the second anterior rib, consistent with consolidation of pneumonia. The left lung field is clear. There is a narrow dense line extending along the left border of the heart, consistent with calcification in the pericardium. There is no fluid in the pleural cavities.

Chest X-ray 1/4/41:

There is extensive mottled dullness involving the entire right lung. The bronchial tree is accentuated in the left lung. There is evidence of pneumonia involving the right lung. When the patient is able to come to the X-ray department, request views in various positions to determine the extent of the calcification in the pericardium.

E. K. G. 1/6/41:

The rhythm is regular and conduction time is normal. The T waves are low throughout the limb leads and upright. In the chest lead, there is some slurring of the upward stroke of the R wave, and the T wave is for the most part inverted. This record is not particularly diagnostic of any cardiac pathology. Rate 91.

E. K. G. 1/9/41:

The rhythm is regular and conduction time normal. The voltage is decreased in the mean deflections throughout the limb leads. T 1 and 2 are quite flat. The chest lead is not abnormal. The electrical systole is increased, being .46. This might be accounted for by a hypocalcemia state, due to the patient's anuria. Rate 90.

Cystoscopy 1/7/41:

Catheterization of ureters. No. 16 F cystoscope passed easily and one ounce of hazy urine obtained. Mucosa moderately hyperaemic. Minute chalk-like particles seen on the floor of the bladder. Fine trabeculations present. Slight enlargement of lateral lobes of the prostate. A No. 5 F catheter passed into each pelvis and urinary flow present from both sides. Pelvis irrigated with sterile water. Catheters kept indwelling.

Cystoscopy 1/8/41:

Cystoscopy and catheterization of ureters. No. 16 F cystoscope passed. Bladder mucosa markedly injected and edematous. Numerous white crystal-like particles seen on the floor of the bladder. Left ureter catheterized and pelvis washed. Catheter left indwelling. Right ureter could not be catheterized.

Note: 500 c.c. of bloody urine obtained on passage of the cystoscope. Bladder urine: sediment — few epithelial, few acid a. uriate crystals, moderate number red blood cells, few white blood cells, tb. smear — no tbc. seen, stained smear — diplococci, some in chain, few pus cells and gram positive, culture — nonhemolytic.

Sulfathiazole Determinations:

1/2 F 3.4 mg %	T 5.3 mg %
1/4 F 4.4 mg %	T 7.2 mg %
1/6 F 14.0 mg %	T 28.5 mg %
1/7 F 14.4 mg %	T 30.9 mg %
1/8 F 11.4 mg %	T 25.1 mg %
1/9 F 11.3 mg %	T 24.4 mg %

Course in Hospital: Because of the blood stream infection the patient was given 50,000 units of Type 1 pneumococcus antiserum plus the usual sulfathiazole treatment of 4 grams for the initial dose and

1 gram every 4 hours thereafter. He responded well, and on the 6th day was afebrile. However, on this day he was also found to have a B. U. N. of 46 with 14 mg. percent free Sulfathiazol and 20 mg. percent of total drug. Sulfathiazol was immediately stopped. However from this time on the patient never put out more than 16 ounces of fluid in spite of intake up to 150 ounces a day. B. U. N. rose to 73 and creatinine to 9.2. Sulfathiazol level did not fall below 11 mg. percent free and 24 mg. percent total drug. The patient gradually became more and more drowsy and expired on the 11th hospital day. Two retrograde cystoscopies to wash crystals from the ureters were of no avail. In the second instance the catheter on the right could not pass into part of the ureter.

Discussion by Dr. Kramer

The essential facts in this case are:—1. Pneumococci Type I in the sputum and blood. 2 Roentgenray evidence of consolidation of the right lung and calcification in the pericardium. 3. Leukocytosis. 4. Clinical improvement following sulfathiazole and specific serum therapy. 5. Anuria with azotemia. 6. Death.

It is obvious that the patient did not die from the pneumonia per se. Consequently death was caused by either some complications arising from the pneumococci infection or by some disease which was present prior to the pneumonia, or as a result of the treatment with sulfathiazole. The probable conditions that might have existed prior to present illness may be categorically enumerated as follows:—1. Pulmonary tuberculosis. 2. Malignancy of the lung, primary or metastatic. 3. Adhesive pericarditis.

Tuberculosis may be ruled out on the basis of the X-ray findings, high white blood count and the apparent well-being of the patient prior to his present illness. Malignancy may also be dismissed as a probability inasmuch as there is nothing in the history or physical examination to make one suspect it. As for adhesive pericarditis the only evidence to support it is the meagre X-ray finding of a narrow dense line extending along the left border of the heart consistent with calcification in the pericardium. Classic signs and symptoms such as hepatic engorgement with ascites, systolic retraction of the chest wall, and congestive failure were completely absent.

The likelihood of a pneumococci meningitis certainly should be considered in spite of the fact that there is nothing in the follow-up notes to suggest it, except that on the 6th hospital day a lumbar puncture was considered but deferred. It would seem to me that unless there were signs of meningeal irritation a lumbar puncture would not have been thought of. I am therefore inclined to consider pneumococcic meningitis as a probable cause of death. The other possibility is that he died from the toxic effects resulting from the treatment with sulfathiazole, and that is not as uncommon as one might wish to believe. This patient following therapy developed backache, hematuria and finally anuria. His blood urea nitrogen rose from 13 mgs. per cent to 73 mgs. per cent and the creatinine to 9.2 mgs. per cent. His CO_2 combining power, however, remained within normal limits (40 and 39). The fact that the urologist succeeded in draining each pelvis on the first attempt plus the normal CO_2 combining power plus a urea nitrogen of only 73, to my mind eliminates uremia as a possible cause of death. The failure to catheterize the right ureter the following day can be attributed to the inflammatory process in the bladder mucosa caused by trauma from previous catheterizations or from sulfathiazole crystals. I do not think the slight enlargement of the lateral lobes of the prostate or the positive Wassermann were in any way contributory.

Diagnosis

From the date available I would venture to suspect that the pathologist found:

1. Unresolved pneumonia.
2. Pneumococcic meningitis.
3. Damage to the renal tubules (intrarenal damage).

Discussion

Dr. Morgan Cutts: "His temperature falling to normal does not fit in with the picture of meningitis."

Dr. Gormly: "I cannot agree that the patient had meningitis because the symptoms point toward kidney involvement. If he did not have uremia, he obviously had a kidney failure. Kidney failure could be the cause of death. Why is meningitis probable? The point I wish to make is that I do not see your reasoning which warrants the diagnosis of pneumococcus meningitis."

Dr. Kramer: "I was thinking of a case that was sent into the Chapin Hospital not so long ago, and it was thought perhaps he had some meningeal irrita-

tion. You can miss the signs very easily. I suggested that an L. P. be done. The following morning the patient died and it was found he had a pneumococcus meningitis."

Dr. Gormly: "If he had a true pneumococcus meningitis, he would have died before he got to the hospital."

Dr. Burgess: "When this man was cystoscoped, did he have an intravenous dye. (No record of its being given.) I agree entirely with Dr. Gormly that he had an intrarenal tubular block, caused by sulfathiazol; that he had cerebral syphilis and an unresolved pneumonia."

Dr. Gormly: "Was there more than one blood culture?"

Dr. Kramer: "Just one."

Dr. Batchelder: "There is a diffused increased density in the right lung from the diaphragm to the second anterior rib, consistent with consolidation of pneumonia. The left lung field is clear. There is increased density on the right side and this sharp line at the left border of the heart is an early calcification of the pericardium mentioned in the record. Dr. Kramer ruled out tuberculosis and the plate shows no evidence of it. The heart is not particularly enlarged; it certainly seems normal for a 64 year old man. There is no evidence of luetic aortitis."

Dr. Bowman: "From the fluid balance chart there is evidence that the kidneys were failing to excrete fluid during the first two days. As I have said before, sulfathiozole is a dangerous drug to use on any patient more than 60 years of age and especially so if there has been any evidence of kidney or heart dysfunction. With toxicity affecting the kidney there is always an increase in the acetylated drug in the blood as there is here. Normally one expects less than 20 p/c of the free sulfathiozole value as acetyl compound. The increase in acetylated drug seems to precede the development of nitrogen retention. When we remember that the solubility of acetyl sulfathiozole is only one third that acetyl sulfathiazine in the urine we see why sulfathiazole will be more apt to give kidney complications. Crystals of acetylated drug in the urine of patients getting sulfathiazole are present in about 80 p/c of all cases, if they are looked for and recognized. The presence of crystals does not mean very much with regard to kidney function. Decreasing urinary output and rising percentages of acetylated drug in the blood are the danger signals."

Dr. Gormly: "The patient may have had a damaged kidney to begin with. It has always been my contention that in pneumonia one complication that cannot be licked is kidney disease. With sulfa drugs the cases that die are caused by renal complications."

Dr. Burgess: "Sulfathiazole is known to produce renal block. Sulfadiazine is thought to be safer as regards this, but it too can produce renal block.

Post-Mortem Findings by Dr. B. Earl Clarke

There was an organizing pneumonia involving all three lobes of the right lung. There was also tabes dorsalis and a cord bladder. This may have been the reason for the abnormal urinary flow. When the kidneys were sectioned there could be seen numerous grayish-yellow streaks in the pyramids. There was also a granular chalky material in the pelves and the right ureter was occluded by a mass of this material. Frozen sections show the collecting tubules to contain sulfathiazole crystals. Chemical examination of the material in the right ureter showed it to be pure acetyl sulfathiazole.

Examination of the brain showed no evidence of meningitis.

Pathological diagnosis.

Pneumonia, organizing.

Tabes, dorsalis.

Obstruction of collecting tubules of kidneys by sulfathiazole crystals.

12th NEW ENGLAND HEALTH INSTITUTE

The opening sessions of the New England Health Institute, held at the Providence Biltmore Hotel, April 21-23, were devoted to discussions on Public Health Nursing, Crippled Children, Health Education, Industrial Hygiene, Laboratory, Vital Statistics, Maternal and Child Health, and Tuberculosis.

Dr. Charles L. Farrell, of the committee on industrial health of the R. I. Medical Society, told the assembled delegates that in order to keep industrial workers at their highest degree of efficiency under strain of war-time production, properly equipped first aid rooms are essential to every plant. "Re-employment physical examinations, as well as pre-employment physical examinations and periodic health checkups during the period of employment are necessary," he stated. He lauded Rhode

Island industry for the health protection of its workers and urged education of employees in the ways of healthful living.

Miss A. Helen Martikainen, health education secretary of the Hartford Tuberculosis and Public Health Society, speaking at the health education section, said that the war has brought an increased need for "joint examination and evaluation of community health problems to prevent individuals and groups with special interests from controlling the public health program."

The sessions on Wednesday, the second day of the Institute, were devoted to School Health, Industrial Hygiene, Environmental Sanitation, Communicable Diseases, Maternal and Child Health, Cancer, and Venereal Disease.

Dr. Orlen Johnson, of the Council of Industrial Health of the American Medical Association, said that last year more than 400 million man days were lost to industry through physical disabilities of workers. He said that in a comparable amount of time 20,000 bombers or a line of tanks 250 miles in length could have been constructed.

Planned programs to provide care for victims of accidents and sickness of children, and cooperation with the community in the control of communicable disease are more important now than ever, Dr. Charles H. Keene, director of health and physical education at the University of Buffalo, told the school health section of the institute. Dr. Keene urged health instruction, periodic health examinations, special medical and dental care, education of handicapped children, and supervision of the health of the teaching staff.

A "systematic immunization" of all school and pre-school children was advised by Dr. William P. Shields of the State Health Department, who pointed to an increase in the incidence of diphtheria in Rhode Island. He said that in 1937 there were but 15 cases with no deaths resulting, while in 1941, 81 cases were treated and one death occurred.

Another increase in disease was noted by Dr. U. E. Zambarano, superintendent of the Wallum Lake Sanitorium, who called attention to the fact that the tuberculosis rate in Rhode Island increased from 33.1 per thousand in 1940 to 37.5 per thousand last year. Dr. Zambarano said that this increase points to what may be expected in these times of war, for war conditions contribute to the increase in the disease.

Dr. Carl Voegtlin held out promise that future practical treatment of cancer would be assured if the studies now under way by the staff of the National Cancer Institute are not interrupted by the war.

Over 400 delegates at the Institute attended the banquet held in the ballroom of the Biltmore on the second night. Dr. Warren F. Draper, assistant to the U. S. Surgeon General, was the principal speaker on the occasion. He called for a preservation of the worker's health and his family's health if the nation's morale is to be sustained in the present war. Governor J. Howard McGrath brought the greetings of the State to the delegates, and greetings from the American Public Health Association were brought by Dr. Reginald M. Atwater, its executive secretary. Dr. Herman C. Pitts, president of the American Society for the Control of Cancer, was toastmaster.

The sessions on Thursday were combined with a joint meeting of the New England Waterworks Association. Special sections were given over to the discussion of Public Health Nursing, Nutrition, and War Preparations and Defense.

"A heavy responsibility rests on the civilian health authorities not only to protect the Army but also the increased civilian population in the defense areas," Dr. Joseph Bolten, medical director of the U. S. Public Health Service, told the delegates on Thursday. He stated that the medical agencies of the armed forces have no authority to regulate conditions in areas adjacent to cantonments that vitally affect the health and welfare of military personnel.

Major George O. Pratt of the 1st Army Corps Surgeon's Office said that the Army is setting out to reclaim the 50,000 New England men who have been rejected for service because of physical defects. The Government's program will include a more efficient health building program in colleges and schools, he stated. Major Pratt estimated that at least 22% of the men rejected for physical and mental defects can be reclaimed. He outlined the proposed selective service rehabilitation program and said that it included obtaining the services of physicians at a nominal fee to do what they can to make the men already rejected fit for selective service.

At a meeting of the directors of the Health Departments of the various New England States, it was voted to hold next year's Institute in Manchester, New Hampshire.

THE RHODE ISLAND SOCIETY OF PATHOLOGISTS

The Rhode Island Society of Pathologists held a meeting on Thursday, April 23rd, at the Rhode Island Hospital, Providence. The program consisted of a tour and inspection of the new Laboratories, Solution Plant and Blood Bank.

Dr. B. Earl Clarke gave an illustrated talk on "The History of the Microscope and Microscopy".

Dr. Irving A. Beck and Mr. Edmund G. E. Anderson were elected to associate membership in the Society.

LOUIS GOODMAN, M.D., *Secretary*

PROVIDENCE MEDICAL ASSOCIATION

A regular meeting of the Providence Medical Association was held at the Medical Library on Monday, April 6, 1942.

Dr. Palmer Congdon was elected to membership.

A resolution was passed opposing the transfer of the Charles V. Chapin Hospital to the State of Rhode Island pending further study of the problem.

The President then proceeded to the scientific program and introduced Dr. Francis E. Rackemann of Boston, Mass., who conducted an Allergy Round Table with the aid of the members of the Boston Allergy Club.

A general discussion of the present state of knowledge concerning clinical allergy was presented. The importance in diagnosis of an accurate history with the actual dates of the beginning of symptoms was stressed.

It was pointed out that skin sensitivity and the sensitivity of the nose or bronchial tree were often quite different. The intracutaneous test was pointed out to be more sensitive than the ordinarily employed scratch test.

Various aspects of treatment were discussed. In the treatment of acute, severe asthma, we were advised to treat the patients gently and avoid the use of morphine.

Attendance: 122.

FRANK B. CUTTS, M.D., *Secretary*

BOOK REVIEWS

A TEXTBOOK OF SURGERY by American Authors: Edited by Frederick Christopher, B.S., M.D., F.A.C.S. Third Edition Completely Revised and Reset. 1764 pages with 1538 illustrations on 771 figures. Philadelphia and London: W. B. Saunders Company, 1942.

This textbook of surgery is the combined effort of 205 of the leading surgeons of the United States and Canada. For the most part the assignment of sections is quite appropriate and the treatment of the various subjects is authoritative. There is some suspicion, however, that a desire to include a large number of authors has resulted in some instances in a choice of subject for which the individual author is less well known. The interpolated comments of the editor lend continuity to the text and tend to lessen the over-emphasis and somewhat prejudicial viewpoint presented in some instances.

As stated in the preface the outstanding advance in surgery since the previous editions is the widespread use of the sulfonamide group of drugs. Their application in the various branches of surgery is now included in the several sections, although—oddly—no mention is made of their value in appendiceal peritonitis.

Another timely innovation is the inclusion of a chapter on war injuries. Actually, however, this section is so sketchy as to add little to the book as a whole.

Among the best sections are the following: bacteriology by Frank L. Meleney, tendon sheath and fascial space infections of the hand by Sumner L. Koch, varicose veins, thrombosis and embolism by Geza de Takats, the thyroid by John deJ. Pemberton and Samuel F. Haines, head injuries by Carl Wheeler Rand, brain tumors by Max M. Peet, sciatica and intervertebral disc by Alfred W. Adson, the autonomic nervous system by James C. White, fractures by several different authors, the breast by S. C. Harvey and Maurice Lenz, the heart by Claude S. Beck, congenital malformations of the stomach (with excellent illustration of the Fredet-Rammstedt operation) by Edward J. Donovan, anomalies of the small intestine by William E. Ladd, intestinal obstruction by Owen H. Wangensteen, the biliary tract by E. Starr Judd and Howard K. Gray, and plastic surgery by Jerome P. Webster, Vilray P. Blair, and James Barret Brown. The chapters on technique and minor procedures are intended especially for students and interns.

Many of the sections not mentioned are certainly adequate, a few mediocre or just routine. This is inevitable, however, in any text attempting to encompass the whole field of surgery.

There are chapters on the surgical specialties such as are usually found in a general textbook of surgery. These include eye, ear, nose and throat, genito-urinary surgery, gynecology and orthopedics. These are generally adequate for the purpose. The rather extensive discussion of static deformities of the spine seems somewhat out of place.

In perusing this work critically the reviewer has noted inevitably certain omissions and certain statements with

which his judgment and teachings would incline him to disagree. On the whole, however, he was impressed by this massive buckram-bound work and can recommend it as a substantial and reasonably successful effort to reduce the tremendous field of surgery to the confines of a single volume.

SEEBERT J. GOLDOWSKY, M.D.

A PRIMER ON THE PREVENTION OF DEFORMITY IN CHILDHOOD. By Richard Beverly Raney, M.D. 177 Pages with 88 Text illustrations. $1.00. National Society for Crippled Children, Inc., Elyria, Ohio. 1941.

This small volume is as its title suggests, a primer. In the preface the author points out that this book was written to be a guide to those persons who first see the sick child; namely, the family physician, the Welfare worker and the Public Health nurse.

The text is written in extremely simple non-technical language which should be easily understood by the average layman. To add to the layman's understanding there is a glossary for any technical terms. The work is illustrated with numerous excellent drawings which bring out the deformities described as no written word could.

The first part of the book describes briefly the common afflictions of childhood which may cause deformity. The remainder of the text deals with each deformity separately.

Each deformity is discussed under the headings Characteristics, Causes and Prevention. Rarely is more than one paragraph devoted to each of the headings. In spite of the brevity the essentials are well covered.

I would recommend this book highly to all persons working in the field of child welfare and health and especially to General Practitioners, who usually see the deformed child first.

LOUIS A. SAGE, M.D.

VICE PRESIDENT OF UPJOHN FIRM DIES

Malcolm Galbraith, vice president and director of sales of the Upjohn Company, died Friday morning, April 10, in Kansas City.

Mr. Galbraith was born in Bowmanville, Ontario, Canada, October 23, 1876. He received his bachelor of pharmacy degree at Ontario College of Pharmacy in 1898, entering the drug business in Ontario the same year. He later became a naturalized citizen of the United States. In 1909 he left the H. K. Mulford Company, of Philadelphia, to join the Upjohn Company. In October 1929 he was elected to the board of directors and named director of sales. He was made vice president of the company in May, 1936.

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